

U.S. Patent Application Serial No. 09/880,081
Preliminary Amendment dated October 6, 2003
Reply to Office Action of February 26, 2003

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A bearing structure, comprising:

an inner ring;

an outer ring coaxially disposed on the outer periphery of said inner ring;

a rolling element rollably sandwiched between said inner ring and said outer ring;

a supporting part integrally formed with and protruding axially from at least one of said inner ring and said outer ring;

wherein,

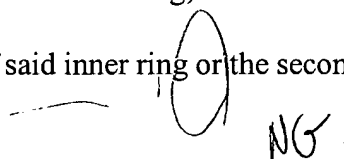
said inner ring being capable of supporting a first member on its inner periphery;

said outer ring being capable of supporting a second member on its outer periphery in a relatively rotatable manner to said first member;

said supporting part being capable of coaxially supporting a third member and also being integrally and coaxially rotatable with said at least one of said inner ring and said outer ring,

wherein said supporting part protrudes in a direction of a rotational axis of the bearing structure and is coaxial with a rotational axis of the inner and outer rings.

2. (Currently Amended) A bearing structure according to claim 1, wherein said third member is engaged with and supported by a supporter formed on the outer periphery of said inner ring or a supporter formed on the inner periphery of said outer ring; and is also spline-engaged with the first member mounted on the inner periphery of said inner ring or the second member mounted on the outer periphery of said outer ring.



Claim 3 (original): A bearing structure according to claim 1, wherein said outer ring constitutes an inner race, said inner ring constitutes an outer race, said rolling element is formed of a plurality of balls sandwiched and set between said inner race and said out race, and, as a whole, constitute a radial ball bearing.

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4. (Currently Amended) A bearing structure according to claim 1, wherein said outer ring constitutes an outer race, said inner ring constitutes an inner race, said rolling element is formed of a plurality of rollers sandwiched and arranged between said inner race and said outer race, and, a radial roller bearing is constituted as a whole.

5. (Currently Amended) A bearing structure according to claim 1

A bearing structure, comprising:

an inner ring;

an outer ring coaxially disposed on the outer periphery of said inner ring;

a rolling element rollably sandwiched between said inner ring and said outer ring;

a supporting part integrally formed with and protruding axially from at least one of said inner ring and said outer ring;

wherein,

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said inner ring being capable of supporting a first member on its inner periphery;

said outer ring being capable of supporting a second member on its outer periphery in a relatively rotatable manner to said first member;

said supporting part being capable of coaxially supporting a third member and also being integrally and coaxially rotatable with said at least one of said inner ring and said outer ring,

wherein said first member consists of a pump impeller hub connected to the pump impeller of a torque converter, said second member consists of a case for supporting said torque converter, and said third member consists of a rotation member which is spline-engaged with and mounted on said pump impeller hub and which rotates integrally with said pump impeller hub.

Claim 6 (original): A bearing structure according to claim 5, wherein said rotation member consists of a drive sprocket for driving, via a chain mechanism, a hydraulic pump mount on said case.

Claim 7 (original): A bearing structure according to claim 1, wherein said inner ring is formed such that the width in the axial direction thereof is longer than the width in the axial direction of said outer ring and protrudes in the axial direction, a fit-engagement/support peripheral face is formed on the outer peripheral face of said inner ring protruding in this way, and said engagement/support peripheral face constitutes said supporter for engageably supporting said third member.

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Claim 8 (withdrawn): A bearing structure according to claim 1, wherein said outer ring is formed such that the width in the axial direction thereof is longer than the width in the axial direction of said inner ring and protrudes in the axial direction, an engagement/support peripheral face is formed on the inner peripheral face of said outer ring protruding in this way, and said engagement/support peripheral face constitutes said supporter for engageably supporting said third member.

Claim 9 (withdrawn): A bearing structure according to claim 1, wherein said inner ring and said outer ring respectively protrude in axially opposite directions, two engagement/support peripheral faces are formed on the outer peripheral face of said inner ring and on the inner peripheral face of said outer ring which protrude in this way, and said two engagement/support peripheral faces respectively constitute said supportes for engageably supporting said third member.

Claim 10 (New): A bearing structure according to claim 5, wherein said third member is spline-engaged with the first member mounted on the inner periphery of said inner ring or the second member mounted on the outer periphery of said outer ring.

Claim 11 (New): A bearing structure according to claim 5, wherein said outer ring constitutes an outer race, said inner ring constitutes an inner race, said rolling element is formed of a plurality of balls sandwiched and set between said inner race and said outer race, and, as a whole, constitute a radial ball bearing.

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Claim 12 (New): A bearing structure according to claim 5, wherein said outer ring constitutes an outer race, said inner ring constitutes an inner race, said rolling element is formed of a plurality of rollers sandwiched and arranged between said inner race and said outer race.

Claim 13 (New): A bearing structure according to claim 5, wherein said inner ring is formed such that the width in the axial direction thereof is longer than the width in the axial direction thereof is longer than the width in the axial direction of said outer ring and protrudes in the axial direction, a fit-engagement/support peripheral face is formed on the outer peripheral face of said inner ring protruding in this way, and said engagement/support peripheral face constitutes said supporter for engageably supporting said third member.